

FORM-PTO-1390 (Rev. 9-2001)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 025219-374
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5) Unassigned 10/018685
INTERNATIONAL APPLICATION NO. PCT/FR00/02178	INTERNATIONAL FILING DATE July 28, 2000	PRIORITY DATE CLAIMED July 30, 1999	
TITLE OF INVENTION PROCESS FOR MANAGING THE PAYMENT OF PARKING CHARGES, VALIDATION VOUCHER AND VERIFICATION TERMINAL FOR THIS PAYMENT			
APPLICANT(S) FOR DO/EO/US Jean-Francois FAVEREAUX			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
<ol style="list-style-type: none">1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))<ol style="list-style-type: none">a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).b. <input type="checkbox"/> has been communicated by the International Bureau.c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))<ol style="list-style-type: none">a. <input checked="" type="checkbox"/> is attached hereto.b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))<ol style="list-style-type: none">a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).b. <input type="checkbox"/> have been communicated by the International Bureau.c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.d. <input type="checkbox"/> have not been made and will not be made.8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).			
Items 11 to 20 below concern document(s) or information included:			
<ol style="list-style-type: none">11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.15. <input type="checkbox"/> A substitute specification.16. <input type="checkbox"/> A change of power of attorney and/or address letter.17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).20. <input checked="" type="checkbox"/> Other items or information:			
PCT Request, PCT Publication, English translation of amended sheets of IPR, Ch II Demand, IPR			



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20 DEC 2001

U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.51) Unassigned 10/018685		INTERNATIONAL APPLICATION NO. PCT/FR00/02178		ATTORNEY'S DOCKET NUMBER 025219-374	
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21. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS		PTO USE ONLY	
Basic National Fee (37 CFR 1.492(a)(1)-(5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1,040.00 (960) International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00 (970) International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00 (958) International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00 (956) International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 (962)							
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$ 890.00			
Surcharge of \$130.00 (154) for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492(e)). 20 <input type="checkbox"/> 30 <input type="checkbox"/>				\$			
Claims	Number Filed	Number Extra	Rate				
Total Claims	17 - 20 =	0	X\$18.00 (966)	\$ 0			
Independent Claims	2 - 3 =	0	X\$84.00 (964)	\$ 0			
Multiple dependent claim(s) (if applicable)				+ \$280.00 (968)		\$	
TOTAL OF ABOVE CALCULATIONS =				\$ 890.00			
Reduction for 1/2 for filing by small entity, if applicable (see below).				+		\$	
SUBTOTAL =				\$ 890.00			
Processing fee of \$130.00 (156) for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492(f)). 20 <input type="checkbox"/> 30 <input type="checkbox"/>				\$			
TOTAL NATIONAL FEE =				\$ 890.00			
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 (581) per property				+		\$ 40.00	
TOTAL FEES ENCLOSED =				\$ 930.00			
				Amount to be refunded:		\$	
				charged:		\$	

a. ☐ Small entity status is hereby claimed.

b. ☒ A check in the amount of \$ 930.00 to cover the above fees is enclosed.

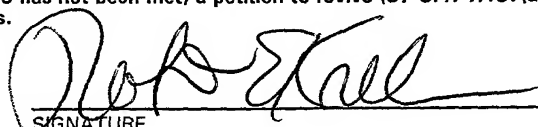
c. ☐ Please charge my Deposit Account No. 02-4800 in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

d. ☐ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-4800. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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 REGISTRATION NUMBER
 December 19, 2001
 DATE

10/018685

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Patent

Attorney's Docket No. 025219-374

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Favereaux) Group Art Unit: Unassigned
Application No.: Unassigned) Examiner: Unassigned
Filed: Herewith)
For: PROCESS FOR MANAGING THE)
PAYMENT OF PARKING CHARGES,)
VALIDATION VOUCHER AND)
VERIFICATION TERMINAL FOR)
THIS PAYMENT)

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the subject application as follows:

IN THE SPECIFICATION

Please amend the specification by inserting before the first line the sentence:

"This application is a national phase of PCT/FR00/02178 which was filed on July 28,
2000, and was not published in English."

REMARKS

Entry of the foregoing amendment to the Specification is requested to comply with the requirements of 37 C.F.R. 1.78(a)(2).

If the Examiner should be of the opinion that a telephone conference would be helpful in resolving any outstanding issues, the Examiner is urged to contact the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By 
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Date: December 19, 2001

PROCESS FOR MANAGING THE PAYMENT OF PARKING CHARGES,
VALIDATION VOUCHER AND VERIFICATION TERMINAL FOR THIS
PAYMENT

Technical field

The present invention concerns a process for managing the payment of parking charges, a validation voucher and a verification terminal for this payment.

5 Prior art

At the present time the means employed to settle parking charges are based on pay and display machines which issue to the driver, in return for an immediate and full cash payment, a ticket indicating the parking
10 entitlement end time. The driver leaves this ticket in view behind his windscreen. Officials responsible for verifying the correct payment of the charges may then validate, during their rounds, the parking of the vehicle. However for the city of Paris, some pay and
15 display machines offer settlement by prepaid card, which is debited of the amount of parking time required.

The use of pay and display machines for paying parking charges has the following drawbacks:

- 20 - The driver must have small change to pay the charge due.
- The driver must know precisely and in advance the length of time he will be parked. If he has wrongly estimated this period of time he has to return to his
25 vehicle, or run the risk of having to pay a fine.
- For the driver the parking charge payment procedure is complex and, for the town council, there are significant losses of profits in respect of non-

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payment, particularly given the previous implications for the driver

- For the town council, the management of a significant stock of urban street furniture subject to weather damage and to malicious action arising from the coins kept in the machines. This stock is, moreover, very sensitive to modifications in coinage, and is in no way adapted to the forthcoming Euro coins.

Replacing coin operated pay and display machines in the city of Paris by card operated pay and display machines does not eliminate the payment access problems, since the driver has every chance of not having a prepaid card: a best case scenario would see the driver carrying prepaid cards on a regular basis, but there always comes a time when the amount remaining is insufficient; at worst the driver is unaware of how such machines operate.

The purpose of the present invention is therefore to facilitate driver access to parking charge payment.

A document of the prior art, US patent 5 905 247, describes a parking charge payment control system which includes a register of parking charges containing information concerning one or more vehicles for which a parking charge payment is made, a device for identifying each vehicle including a vehicle code, for example a bar code affixed to the vehicle windscreen, which may be read by means of a control device and such a control device allowing at one and the same time the vehicle code to be read automatically, for example optically, a control request message containing the vehicle code to be transmitted to the parking charge register, and an information message concerning the payment or non-payment of the parking charge to be received.

Disclosure of the invention

The present invention concerns a process for managing the payment of parking charges in a given geographical area for a user of at least one vehicle, characterised in that it includes the following stages:

- the user goes to an approved point to subscribe to a virtual pay and display service where he completes a subscription form, where he provides particulars of his bank account, and where he receives an ID in two parts: on the one hand a sticker comprising an optical code, on the other a hidden secret code;

- he uncovers his secret code,

- he affixes the sticker to the windscreen of a said vehicle.

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- when said user parks a said vehicle at a location within a geographical area covered by the virtual time pay and display service, he keys in on a telephone terminal a pre-set telephone server access
5 number, he authenticates himself with this server by giving a coded ID corresponding to the optical code, he keys in the secret code, he indicates the prospective parking end time, and he validates his instruction.

The user may program another parking end time by
10 accessing the telephone server, by keying in its pre-set access number.

The user may also request, by mail, certification of his payment.

To advantage the optical code is a bar code. The
15 user receives an ID in the form of a voucher in two parts: the first forming the sticker, the second containing the secret code. The sticker may be a self-adhesive sticker, or be made of a material, such as paper or card, allowing the user to insert the sticker
20 into a transparent pocket fixed on the windscreen of a said vehicle. The secret code may be a secret scratch code on the second part of the voucher.

The official responsible for verifying the correct payment of the parking charges uses an optical reader
25 allowing the optical code applied on the windscreen of a vehicle to be read, this reading being transmitted by means of a mobile telephone to the telephone server which verifies the payment of the parking charge for the ID concerned. To advantage an optical or sound
30 signal emitted by the mobile telephone warns the official responsible for verification in the event of invalid parking.

The invention also concerns the parking charge payment voucher characterised in that it includes two parts, the first forming a sticker comprising an optical code, which may be a bar code, the second
5 containing a secret code. This voucher may be made of any material, such as paper or card, such that the user may insert it into a transparent pocket fixed on the windscreen of a vehicle. The secret code may be a secret scratch code. The sticker may also be a self-
10 adhesive sticker.

The invention also concerns a parking charge payment verification terminal characterised in that it includes a mobile telephone connected to an optical reader.

15 Implementing the process of the invention modifies:

- parking charge payment means, by introducing direct debit technology;
- means employed by town councils to recover
20 parking charges by replacing physical pay and display machines by voice servers acting as virtual pay and display machines;
- means available to officials checking vehicle parking entitlement validity by providing them with a
25 read and communication tool.

The process of the invention makes it possible to facilitate user access to parking charge payment by means particularly of:

- payment instruction for subsequent withdrawal
30 from a bank account, which eliminates the need for immediate payment means;

- payment instruction access not associated with the place of parking, which allows the user an unstressed management of his parking time;

- homogeneity of the payment means, which allows the user to take advantage of the accessibility of parking charge payment, even while moving around outside.

This process of the invention allows, moreover, town councils to be given the means to manage parking charge payments in a more flexible way.

- by cutting back on costly to maintain equipment (the pay and display machines), a fact which for town councils brings a reduction in their operational costs by eliminating opportunities for vandalism and coin collection costs;

- by independently implementing coin format changes, which will in particular allow town councils to cut their Euro conversion costs;

- by removing causes of non-payment generated by impossible access to payment; the user not having enough coins available to pay the parking charge, a physical handicap restricting his mobility, etc.

Brief description of the drawings

Figure 1 shows the different means involved in the process of the invention.

Figure 2 shows the dialogue between the user and the pay and display telephone server, according to the process of the invention.

Figure 3 shows a voucher which a user may receive during his subscription to the virtual pay and display service.

Figure 4 shows the verification of the proper payment of parking charges in the process of the invention.

Figure 5 shows an example of an embodiment of the payment verification terminal.

Detailed disclosure of embodiments

The present invention is intended for drivers or users who wish to be able to park a vehicle at a parking place subject to a parking charge, for example on a time basis, which the driver has to settle immediately and in full for a limited time period.

In the process of the invention the user goes in a first instance to the town hall or to any approved point to subscribe to a virtual pay and display service, where he completes a subscription form, where he provides particulars of his bank account so that the payment may be made by direct debit, and is given in exchange an ID in two parts: on the one hand a sticker comprising an optical code, on the other a secret code.

As shown in figure 1, the subscriber user 10 then affixes said sticker 11 to a vehicle 12. When subsequently he parks at a location 13 where a charge is levied, in any geographical area covered by the system, all he has to do to pay his parking charge is to key in a given freephone number, from any kind of telephone 14 (payphone, mobile phone or fixed phone).

This free access number to a pay and display telephone server 15 is conveyed specifically by local switching 16 connected to the town hall so that access can be given to the pay and display server of this town council. When the user is travelling in other towns, the same access number connects him to the pay and

display telephone server of the town council concerned by the parking and not of the original town council where the service was subscribed to.

When this number, which for reasons of ease of use
5 may be a short number, has been keyed in, a voice server asks him to authenticate himself (coded bar code ID) and to key in a secret code, then asks him the prospective parking end time after showing him the current charge in the geographical area concerned. Once
10 the user has validated his instruction, the direct debit can be applied to his bank account 17.

This is the dialogue shown in figure 2 between the user and the pay and display telephone server.

If, subsequently, the user realises that he cannot
15 return to his vehicle before the time expires, he may program another parking end time, again by accessing the voice server by keying in the freephone number. The user may, subsequently, request by mail certification of his payment.

20 In an advantageous embodiment example shown in figure 3, the ID is given in the form of a voucher 20 in two parts: on the one hand a sticker 21, comprising a bar code, to be affixed to the windscreen of his vehicle or of one of his vehicles, on the other hand a
25 secret scratch code 22.

The sticker 21 may be a self-adhesive sticker, or be a sticker, which can be inserted into a transparent pocket fixed on the windscreen of a vehicle. This sticker may be associated with a vehicle or with a
30 driver. In the latter case it may be used for several vehicles, which is possible by using a sticker which may be inserted into several pockets.

As shown in figure 4, the officials responsible for verifying the correct payment of parking charges have at their disposal a mobile terminal 31 linked to an optical reader 32, which allows them to read the bar code 11 applied on the windscreen of the vehicle 12. This reading is transmitted via the mobile terminal 31 to the pay and display server 15, which verifies the payment of the parking charge in respect of the ID concerned. A signal, for example a sound or light signal, emitted by the mobile warns the official responsible for verification in the event of invalid parking.

The pay and display telephone server 15 has sufficient capacities to establish a dialogue with the user 10 in order to receive his ID and secret code, to take into account any credit corresponding to this ID, to provide the user 10 with the parking charge hourly amount, to guide the user 10 so that he is able to enter a coherent parking end time, to calculate the amount to be debited as a function of the possible credit, to indicate the amount to the user 10, and to send the direct debit instruction to a bank account corresponding to the ID. This server must also be able to communicate with the mobile terminals 31 of the officials responsible for verification so as to receive the optically read IDs which are transmitted to it and to monitor the credit associated with an ID before returning a positive or negative acknowledgement to the terminal of a said official.

As shown in figure 5, the verification terminal 31 may be composed of a mobile telephone connected to an optical bar code reader 32. In this way a mobile telephone operating under the GSM standard may be used,

equipped on one of its faces with an optical receiver. When the device is put on line, it may be directly connected to the pay and display telephone server without the official needing to key in a number. For example without keying in numbers in the three seconds after getting on line, the pay and display telephone server access number reserved for officials may be keyed in automatically. The official is then able to point the optical reader at the bar code of a vehicle being inspected. The information picked up (the ID) is transmitted via the mobile telephone to the pay and display telephone server and the verification device awaits from the server a positive or negative acknowledgement. The server then consults the parking end time corresponding to this ID before sending a negative acknowledgement in the event of invalidity. In the event of negative acknowledgement the verification device emits a sound or light signal.

20 Example of an advantageous embodiment

In one embodiment example the characteristics of the invention are as follows:

Voucher 20

- 25 The voucher has the following characteristics:
- it is made up of two distinct parts: one (the sticker), which is to be affixed to the windscreen, comprises a bar code; the other, which is to be cut off, bears a secret code hidden by a substance which
 - 30 may be scratched off;
 - the voucher is made of thick paper, the first part is about 7 cm long and 4 cm wide, the second part

is a 4 cm sided square, the background is white and the ink is for example black;

- the voucher is issued with one or more self-adhesive pockets into which the first part for affixing to the windscreen may be slipped; thus, the voucher is not stuck to the windscreen and may be affixed to the windscreen of any vehicle provided there is an appropriately sized self-adhesive pocket available.

10 Pay and display server 15

The pay and display server is a commercially available telephone server having at least the following capacities:

- a connection to the telephone network of the T2 or equivalent type allowing up to several dozen calls to be processed every second;

- a database containing one table per subscriber; the key to this table is the ID (which is found on the voucher as a figure for the user and as a bar code for the official responsible for verification); the other fields are the subscriber name, his secret code, his address, possibly his bank account number and the current credit;

- an intelligent peripheral function to provide voice announcements.

This server may be installed in the premises of the town council managing the parking charges.

- The switches of the public network (fixed and mobile) allow the server access code (a four-digit number of the 3609 type identical throughout the country) to be translated into the number of the server actually present in the area they cover. Charging for calls to the server is left to operator choice in

compliance with the regulatory framework. However, the invention is especially advantageous in that the user is not charged for a call to the server.

5 Verification terminal 31

The official responsible for verification has at his disposal a verification device able to read bar codes and establish a communication with the pay and display server. This device is constituted by coupling
10 a bar code reader with a GSM terminal.

Subscription

The invention is intended for the public at large and must benefit from a distribution mode which is very
15 far reaching (tobacconists, Telecom shops, town council, supermarkets, etc.) and very straightforward (providing particulars of one's bank account and some evidence of home address in return for the provision of the voucher which can be used immediately since the
20 direct debit instructions issued by the server in real-time are processed after the event, therefore after registration of the driver name and address details).

The user provides particulars of his bank account and some evidence of his home address and completes a
25 subscription form. The distributor gives him the voucher and self-adhesive pockets. The user scratches his secret code and affixes the bar code part of the voucher in a pocket to his windscreen. The distributor transmits the file (bank account particulars, evidence,
30 form) to the telecommunications operator who undertakes to record the subscriber's data in all the pay and display servers he has installed.

Payment modes

Two modes of payment may be used in accordance with banking agreements:

- automatic monthly direct debit grouping together
5 all the direct debit instructions issued, in the month, by the server for a same ID;

- monthly invoice sent to the user (the subscriber name) grouping together the amount of all the direct debit instructions issued, in the month, by the server
10 for a same ID.

In both cases, the server issues a direct debit instruction (a ticket including the date and time of the instruction, the date and parking end time requested, the amount of the charge to be directly
15 debited and the ID concerned), for each call which has involved parking charges to be directly debited. The direct debit instruction tickets may also serve as evidence to be sent to the user at his request.

20 Parking

The subscriber user may park in any of the parking places managed by a town council using the invention, in other words parking places along streets or in parking areas without taking action to settle charges.

25

Payment Instruction

The user of a vehicle fitted with a sticker (even if he is not the subscriber user as long as knows the secret code) may settle his parking charges by
30 telephone (mobile, payphone, fixed telephone). He may add parking time in the same way (the server then takes account of the remaining credit to establish the new amount to be paid).

Decrement of the remaining credit

Every minute, the server reduces the credit of each parked vehicle for which the parking charge has been paid via the invention (as a function of the rate per minute). No action is taken when the remaining credit returns to zero.

Verification by official

The officials responsible for verification of the correct payment of parking charges have at their disposal a GSM terminal linked to a bar code reader which they apply, as they do their rounds verifying the bar codes of vehicles parked in areas where a charge is levied (if these do not otherwise have a ticket provided by a physical pay and display machine).

On getting on line on the GSM terminal, if the official does not key in a number within three seconds, the terminal connects via a permanent logic connection to the server. As soon as a bar code is read, the data packet corresponding to the ID is sent to the server which then consults its database and sends back a sound alarm signal if the parking end time is exceeded for the vehicle being monitored.

The different stages in the process of the invention are, then, disclosed below, each stage being constituted by a user action, a server process and response via a voice announcement (if the user hangs up before validation, the operation does not issue a direct debit instruction).

User action	Access server (3609)
Server process	Translate number Communicate with the server of the relevant Town Council

Server response	Request authentication
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User action	Authenticate (ID + secret code)		
Server process	Access database to load the table corresponding to the ID provided Verify secret code		
Server response	If code correct, indicate cost per hour and request required end time	If code wrong, announce code incorrect and request authentication (up to three times before code blocked)	If ID non-existent, announce ID non-existent and request authentication

User action	Enter end time (in 4 figures, 2 for the hours between 00 and 23 and 2 for the minutes between 00 and 59)	
Server process	Verify time format Calculate end time in minutes Calculate current time in minutes Calculate charge amount using the formula: $\text{Amount} = (\text{end time} - \text{current time}) \times \text{rate per minute} - \text{remaining credit}$	
Server response	If time valid, restate end time and indicate cost to be debited following validation, then request validation or cancellation (repeated following any correct action of the user)	If time invalid, announce way to enter time and request required end time to be entered

User action	Validate (press key proposed by server for validation)	Cancel (press key proposed by server for cancellation)
Server process	Issue a direct debit instruction (ticket including date and time of instruction, date and parking end time required, amount of charge to be debited and the relevant ID)	Release resources
Server response	Confirm end time and the direct debit amount and invite to hang up	Confirm cancellation and invitation to hang up

User action	Hang up
Server process	Release resources

CLAIMS

1. A process for managing the payment of parking charges in a given geographical area for a user (10) of at least one vehicle (13), characterised in that it includes the following stages:

- 5 - the user goes to an approved point to subscribe to a virtual pay and display service where he completes a subscription form, where he provides particulars of his bank account, and where he receives an ID in two parts: on the one hand a sticker (11) comprising an
10 optical code, on the other a secret hidden code;
 - he uncovers his secret code,
 - he affixes the sticker (11) to the windscreen of a said vehicle (13).
 - when said user (10) parks a said vehicle at a
15 location within a geographical area covered by the virtual time pay and display service, he keys in on a telephone terminal (14) a pre-set telephone server (15) access number, he authenticates himself with this server (15) by giving a coded ID corresponding to the
20 optical code, and he keys in the secret code, he indicates the prospective parking end time, and he validates his instruction.

2. A process according to claim 1, wherein the
25 user programs another parking end time by accessing the telephone server (15), by keying in its pre-set access number.

3. A process according to claim 1, wherein the
30 user requests, by mail, certification of his payment.

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4. A process according to claim 1, wherein the optical code is a bar code.

5. A process according to claim 1, wherein the user receives an ID in the form of a voucher (20) in two parts, the first (21) forming the sticker, the second (22) containing the secret code.

6. A process according to claim 5, wherein the sticker is a self-adhesive sticker.

7. A process according to claim 3, wherein the sticker is made of a material, such that the user can insert it into a transparent pocket fixed on the windscreen of a said vehicle.

8. A process according to claim 5, wherein the secret code is a secret scratch code on the second part of the voucher.

9. A process according to claim 1, wherein the official responsible for verifying the correct payment of the parking charges uses an optical reader to read the optical code applied on the windscreen of a vehicle, and wherein this reading is transmitted by means of a mobile telephone to the telephone server which verifies the payment of the parking charge for the ID concerned.

10. A process according to claim 9, wherein a signal emitted by the mobile telephone warns the official in the event of invalid parking.

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11. A process according to claim 10, wherein the signal emitted is an optical signal or a sound signal.

5 12. A voucher for the payment of parking charges, characterised in that it includes two parts, the first (21) forming a sticker comprising an optical code, the second (22) containing a secret code.

10 13. A voucher according to claim 12, wherein the optical code is a bar code.

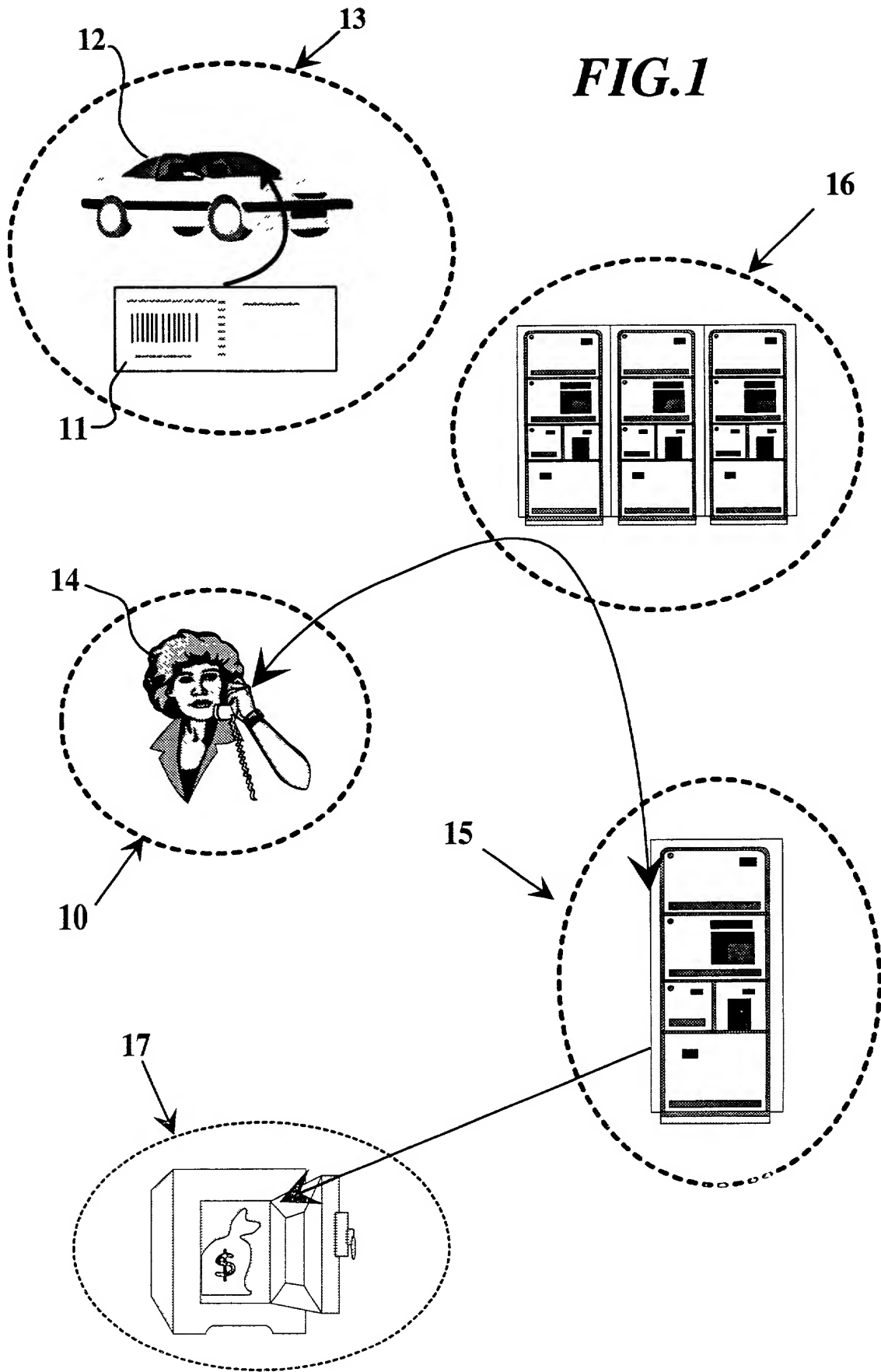
14. A voucher according to claim 12, wherein the sticker is a self-adhesive sticker.

15 15. A voucher according to claim 12, wherein the sticker is made of a material such that it may be inserted into a transparent pocket fixed on the windscreen of a vehicle.

20 16. A voucher according to claim 12, wherein the secret code is a secret scratch code.

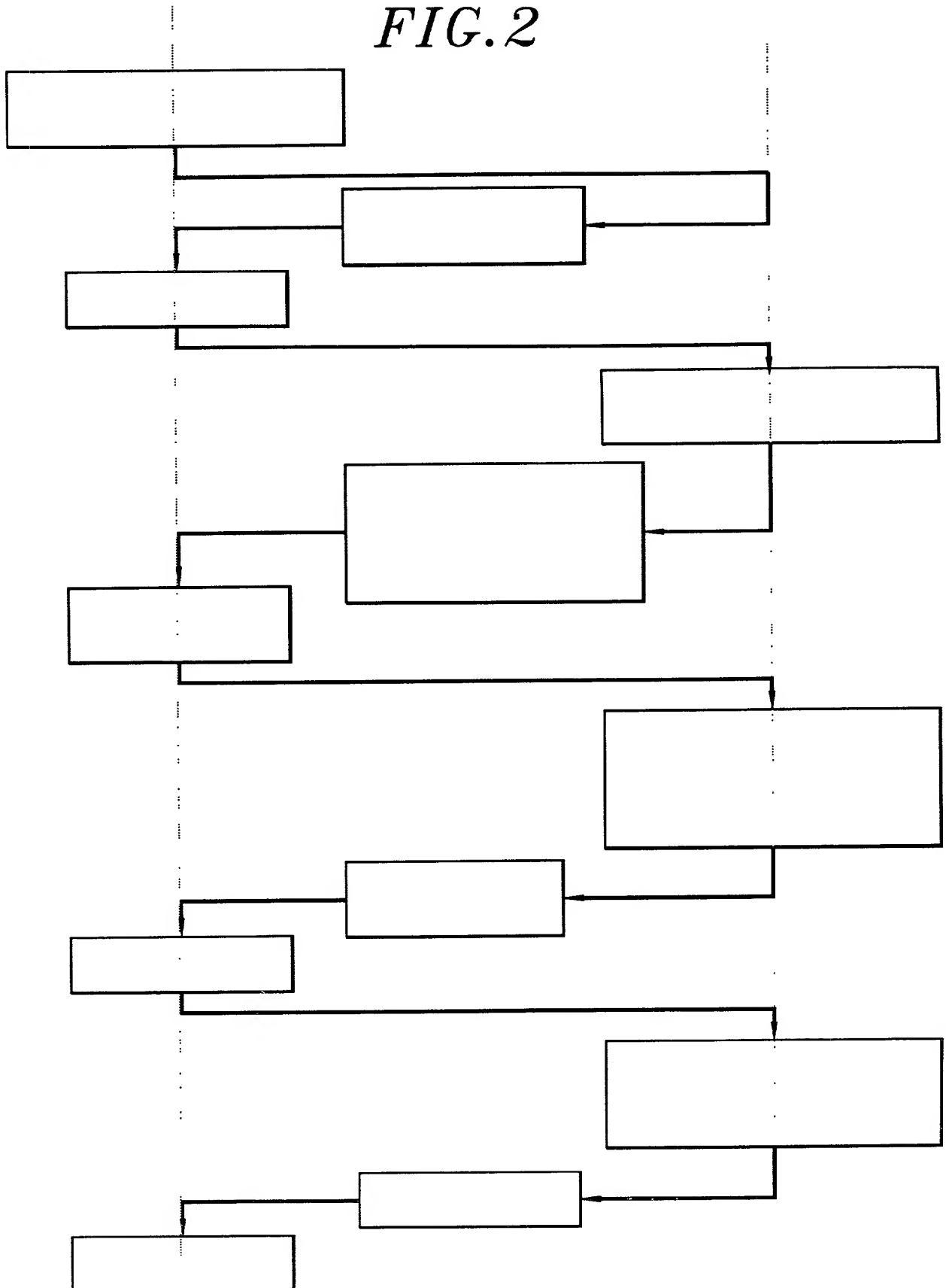
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FIG. 1



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FIG.2



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FIG.4

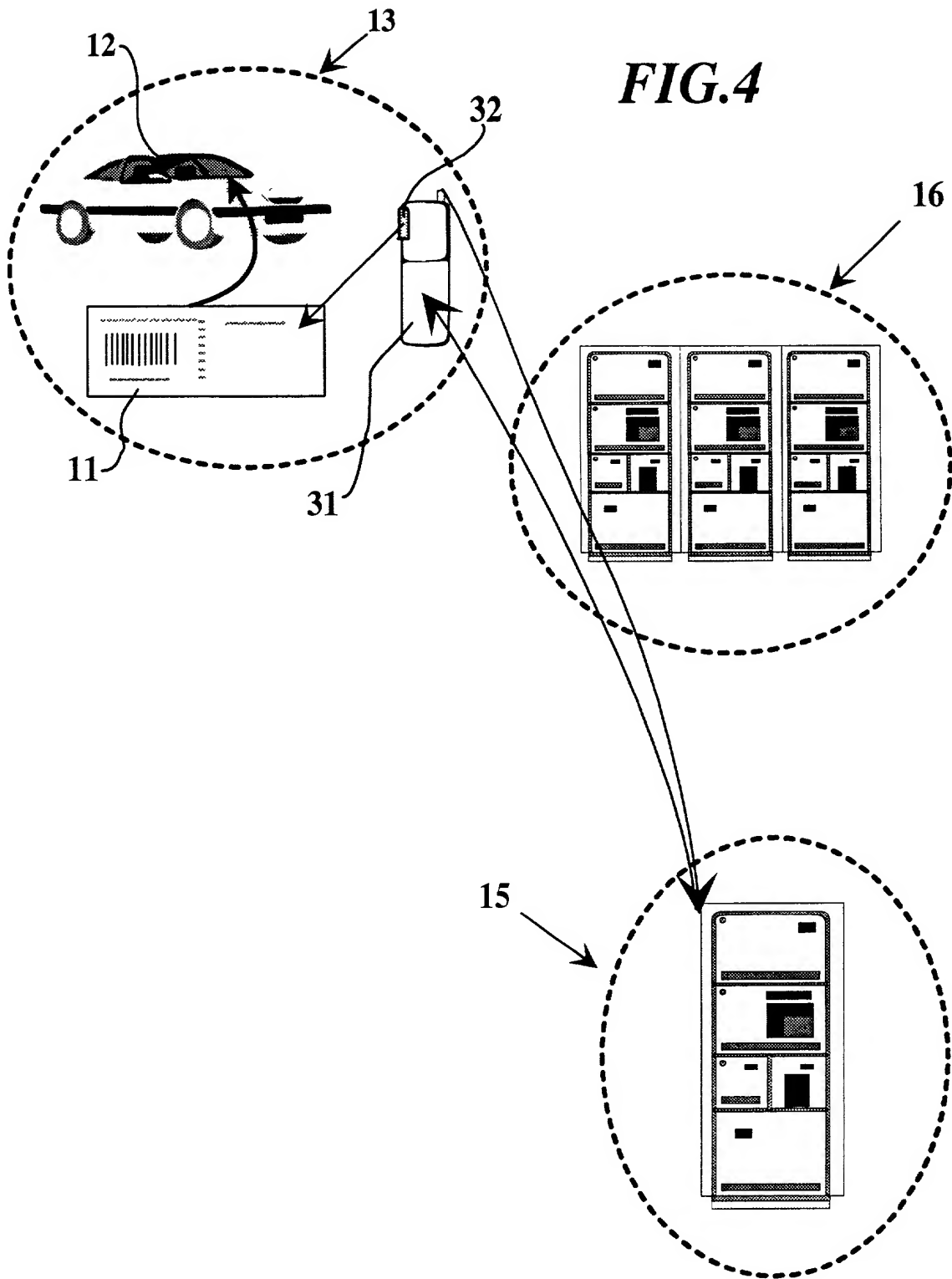


FIG. 3

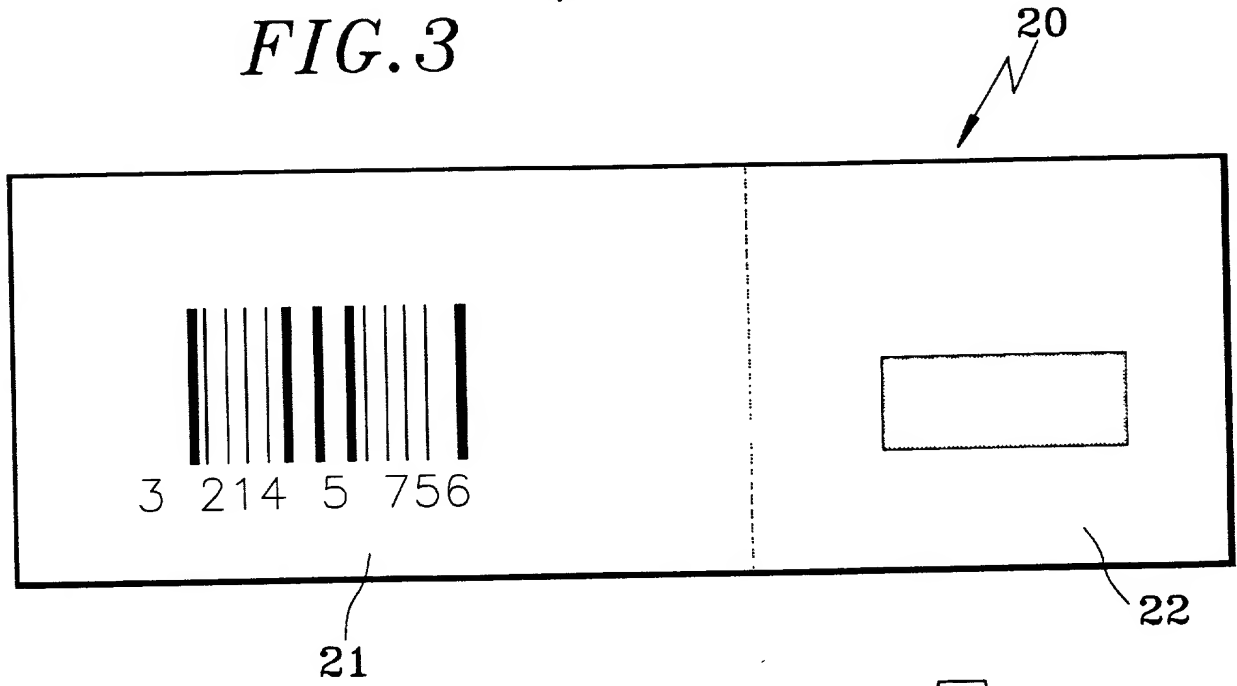
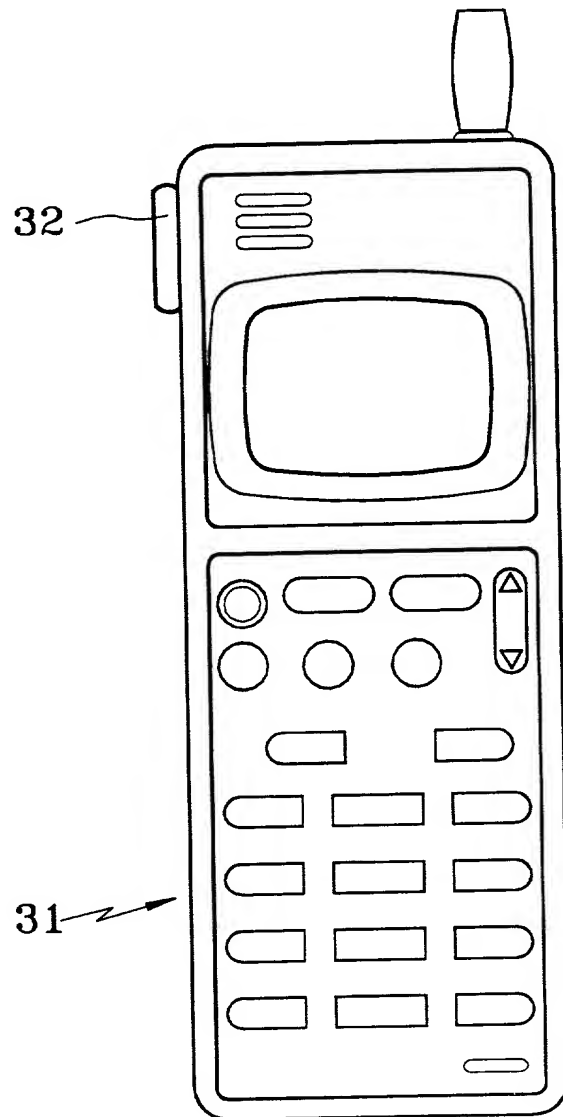


FIG. 5



We (I) hereby claim the benefit under Title 35, United States Code, § 119 (e) of any United States provisional application(s) listed below.

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

We (I) hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of prior application and the national or PCT International filing date of this application.

Application Serial No.

Filing Date

Status (pending, patented,
abandoned)

And we (I) hereby appoint : William L. Mathis, Registration Number 17,337; Robert S. Swecker, Registration Number 19,885; Platon N. Mandros, Registration Number 22,124; Benton S. Duffett Jr., Registration Number 22,030; Norman H. Stepno, Registration Number 22,716; Ronald L. Grudziecki, Registration Number 24,970; Frederick G. Michaud Jr, Registration Number 26,003; Alan E. Kopecki, Registration Number 25,813; Regis E. Slutter, Registration Number 26,999; Samuel C. Miller III, Registration Number 27,360; Robert G. Mukai, Registration Number 28,531; George A. Hovanec, Jr. Registration Number 28,223; James A. Labarre, Registration Number 28,632; E. Joseph Gess, Registration Number 28,510; R. Danny Huntington, Registration Number 27,903; Eric H. Weisblätt, Registration Number 30,505; James W. Peterson, Registration Number 26,057; Teresa Stanek REA, Registration Number 30,427; Robert E. Krebs, Registration Number 25,885; William C. Rowland, Registration Number 30,888; T. Gene Dillahunty, Registration Number 25,423; Patrick C. Keane, Registration Number 32,858; Bruce J. Boggs, Jr. Registration Number 32,344; William H. Benz, Registration Number 25,952; Peter K. Skiff, Registration Number 31,917; Richard J. McGrath, Registration Number 29,195; Matthew L. Schneider, Registration Number 32,814; Michael G. Savage, Registration Number 32,596; Gerald F. Swiss, Registration Number 30,113; Michael J. Ure, Registration Number 33,089; Charles F. Wieland III, Registration Number 33,096; Bruce T. Wieder, Registration Number 33,815; Todd R. Walters, Registration Number 34,040; Ronni S. Jillions, Registration Number 31,979; Harold R. Brown III, Registration Number 36,341; Allen R. Baum, Registration Number 36,086; Steven M. Du Bois, Registration Number 35,023; Brian P. O'Shaughnessy, Registration Number 32,747; Kenneth B. Leffler, Registration Number 36,075 and Fred W. Hathaway, Registration Number 32,236 our (my) attorneys, with full powers of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith; and we (I) hereby request that all correspondence regarding this application be sent to the firm of BURNS, DOANE, SWECKER & MATHIS LLP, whose post Office Address is : 1737 King Street #400, Alexandria, Virginia 22314-2727.

We (I) declare that all statements made herein of our (my) own knowledge are true and that all statements made on information and belief are believed to be true ; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardise the validity of the application or any patent issuing thereon.

FAVERAUX Jean-François

NAME OF FIRST SOLE INVENTOR

Signature of Inventor

December 10, 2001

Date

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Citizen of : FRANCE

Post Office Address : The same as residence

Declaration, Power Of Attorney and Petition

WE (I) the undersigned inventor(s), hereby declare(s) that :

My residence, post office address and citizenship are as stated below next to my name,

We (I) believe that we are (I am) the original, first, and joint (sole) inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled

PROCESS FOR MANAGING THE PAYMENT OF PARKING CHARGES, VALIDATION
VOUCHER AND VERIFICATION TERMINAL FOR THIS PAYMENT

the specification of which

- ☐ is attached hereto.
- ☐ was filed on
as Application Serial No.
and amended on
- ☒ was filed as PCT international application
Number PCT/FR00/02178
on July 28, 2000
and was amended under PCT Article 19
on May 21, 2001

We (I) hereby state that we (I) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We (I) acknowledge the duty to disclose information known to be material to the patentability of this application as defined in Section 1.56 of Title 37 Code of Federal Regulations.

We (I) hereby claim foreign priority benefits under 35 U.S.C. § 119 (a)-(d) or § 365 (b) of any foreign application(s) for patent or inventor's certificate, or § 365 (a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed. Prior Foreign Application (s)

Application No.	Country	Day/month/Year	Priority Claimed	
99 09945	FRANCE	30 JULY 1999	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
_____	_____	_____	<input type="checkbox"/> YES	<input type="checkbox"/> NO
_____	_____	_____	<input type="checkbox"/> YES	<input type="checkbox"/> NO
_____	_____	_____	<input type="checkbox"/> YES	<input type="checkbox"/> NO

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